Desk Statement

EPA Proposes New Protections Related to Neonicotinoid Pesticides

EPA is proposing new measures to protect human health and the environment in its preliminary interim regulatory decisions for imidacloprid, clothianidin, thiamethoxam, dinotefuran and acetamiprid, which are collectively neonicotinoids.

The neonicotinoids are a group of insecticides used in agriculture to treat foliage, soil and seeds for a wide variety of crops. They are also registered for use to treat turf, ornamentals, pets (for fleas) and other residential and commercial indoor and outdoor uses.

For imidacloprid, there are potential risks to children and adults that exceed EPA's level of concern from spray applications of imidacloprid to residential turf. Therefore, EPA is proposing to cancel all uses of imidacloprid on residential turf under the Food Quality Protection Act due to these concerns.

Although the use of imidacloprid on residential turf is an important use in the market, the Agency is required to mitigate non-occupational residential risk under FQPA to ensure "reasonable certainty that no harm will result from aggregate exposure" from pesticide residue in food, drinking water or from residential uses. If implemented, this cancellation will also reduce imidacloprid risks to bees in residential areas.

Workers in seed treatment facilities and applicators in certain agricultural spray scenarios have potential for risk that exceeds the Agency's level of concern. EPA is proposing additional personal protection equipment, such as gloves and respirators, or requiring closed loading systems on labels.

The proposed decisions for four of the five chemicals include reductions in the amounts that can be applied, which are tailored specifically to the risks and benefits associated with each crop.

Neonicotinoid pesticides are often the most effective protection against difficult pests. In Florida, for example, the Asian citrus psyllid represents an existential threat to the U.S. citrus industry. By the time orange and other citrus trees shows signs of infestation by this invasive pest, the crop is ruined, and the trees will die. There are similar problems with damaging pests for cotton, grapes and other crops. Neonicotinoids can be used to combat all of these pests, and more.

The Agency invites comments on the decisions in the following linked dockets through DATE:

[HYPERLINK "https://www.regulations.gov/docket?D=EPA-HQ-OPP-2008-0844"]
[HYPERLINK "https://www.regulations.gov/docket?D=EPA-HQ-OPP-2011-0865"]
[HYPERLINK "https://www.regulations.gov/docket?D=EPA-HQ-OPP-2011-0581"]
[HYPERLINK "https://www.regulations.gov/docket?D=EPA-HQ-OPP-2011-0920"]
[HYPERLINK "https://www.regulations.gov/docket?D=EPA-HQ-OPP-2012-0329"]

Additional Background

Though all five of the aforementioned substances are in the neonicotinoid class, acetamiprid is chemically distinct (cyano-substituted) from the others (nitroguanidine-substituted, or N-S) and has a generally lower risk profile to people and non-target species, such as bees, than the other four N-S compounds. Please see the acetamiprid docket linked above for more information.

EPA's ecological risk assessments show that for all the N-S neonicotinoids, spray applications pose potential risks to bees. But balancing environmental risks against benefits is a key requirement of U.S. pesticide law. While other countries only look at risk, federal law requires EPA to use the most robust data available to identify risks as well as benefits and consider both in our pesticide regulatory decisions.

EPA has applied this same approach to identify and address potential risks to other non-target species, including birds and aquatic species, across all registered uses. Through well-informed, targeted approaches to mitigation, the Agency is confident the risks that remain from registered uses of the neonics are appropriately balanced by the benefits, as defined in federal law.

Neonic PID Internal Qs & As

Q1) Why isn't EPA banning the neonics like they have in the EU, Canada and other countries?

One reason why EPA's pesticide regulatory decisions sometimes do not track with those of foreign countries is federal pesticide law in the United States. The Federal Insecticide, Rodenticide and Fungicide Act requires EPA to consider the risks and the benefits of registered pesticide use, but many other countries only look at risks. The EU, for example, has codified a [HYPERLINK "https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM%3Al32042"] under which manufacturers must "prove the absence of danger." This naturally leads to different regulatory conclusions than a paradigm that requires risks to be weighed against benefits.

Another reason EPA's decisions differ from other countries is that our crops, climate and other factors differ, which results in both different pest pressures and associated registered uses. Canada, for example, has no commercial citrus groves and produces less than 2 percent of the quantity of grapes as the U.S.

Q2) Canada is banning the neonics due to risks to aquatic invertebrates. Why isn't EPA doing the same?

Potential risks to aquatic invertebrates, which play a foundational role in ecological food webs, are a concern. But Canada does not have the risk/benefit balancing requirement that EPA must account for under FIFRA. To address concerns about aquatic invertebrates under U.S. law, EPA put unprecedented effort into evaluating the risks to aquatic invertebrates that are associated with all uses, crops, crop stages, sites, *etc.* Adjusting application rates or timing will sufficiently lower potential risks to these ecologically important species while still maintaining the availability of these tools for growers.

Q3) What about risks to birds from seeds that have been coated with neonicotinoids to protect the plant as it sprouts and grows?

Seed treatments have very high benefits and a much better risk profile for people and wildlife, including endangered species, compared to spray applications to the surface of an entire field.

That being said, there are potential risks to birds and small mammals that eat seeds that are coated with neonicotinoids. We believe that best management practices—such as farmers picking up spilled seed—will mitigate this concern. Additionally, farmers often apply a bird repellent to seeds that greatly discourages consumption by birds. High-tech, computer-controlled planting equipment is also becoming increasingly common in the U.S. and helps decrease incidence of spills compared to older, manually operated equipment.

Q4) What about risks from pet flea and tick products?

Though this has been less of a hot topic in media reporting compared to pollinator concerns, EPA has received human and pet health incident reports associated with neonicotinoid spot-ons and collars. Over the years, we have required registrants to make changes to spot-on products to address these concerns. At this time, we are not proposing additional mitigation on pet collars because the benefits are very high, with tens of millions of collars sold per year without ill effects, and the risks remain unclear. The Agency will continue to monitor these incidents.

Q5) What about the human health risks?

In addition to the risks to both children and adults from residential turf spray applications of imidacloprid described in the desk statement above, EPA also identified exceedances for several occupational use scenarios. For example, workers in seed treatment facilities and applicators in certain agricultural spray scenarios have potential for risk that exceeds the Agency's level of concern. EPA is proposing additional personal protection equipment, such as gloves and respirators, or requiring closed loading systems on labels. The Agency does not anticipate significant objections to these proposals.

Q6) What about bee kills caused by dust from off-site drift from seed treatments?

For the neonicotinoid active ingredients with seed treatment uses, the potential for off-site drift of contaminated dust at the time of planting was noted in the risk assessments. EPA is focusing on mitigating risks from this exposure pathway through wider education and encouraging best management practices. The Agency is working with the regulated community to develop new technologies to reduce potential dust-off during planting. [HYPERLINK "https://www.epa.gov/pollinator-protection/2013-summit-reducing-exposure-dust-treated-seed"] provides more information on this issue.

The docket at the time of release of the preliminary interim decision will also include stewardship pieces from EPA and technical registrants discussing potential ways for increasing education on best management practices that reduce potential exposure to bees from dust-off.

Q7) Is EPA's proposed mitigation protective of bees/pollinators?

EPA's risk management approach for neonics is to preserve a key tool for growers while maximizing targeted risk reduction, particularly to honey bees that provide a benefit to agriculture through pollination services. Rate reductions for certain crops where pollinator/bee exposure is expected and restricting critical pre-bloom application for certain crops is expected to significantly reduce potential risks to pollinators, including native bee species.

Voluntary stewardship efforts to encourage best practices, education and outreach to applicators and beekeepers is also a key component in promoting pollinator protection.

Neonic PID Tweets

New data support EPA's proposal to cancel residential turf applications of imidacloprid, a neonicotinoid insecticide.

EPA assessments find that neonic insecticide seed coatings and other uses do not pose risks of concern to bee colonies.

Like orange juice? Asian citrus psyllid represents an existential threat to US citrus growers. EPA's proposed regulatory decisions on neonic insecticides lets growers continue protecting their groves from citrus greening disease.